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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/636,005	**Applicant(s)** WRIGHT ET AL.	
	Examiner KISHIN G. BELANI	**Art Unit** 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to Applicant's RCE filed on 12/21/2007. **Independent claims 1, 6 and 13 have been amended** with added limitations. **Dependent claims 4 and 5 have been amended to correct minor informalities**. **Claims 1-21 are now pending** in the present application. The applicants' amendments to claims are shown in ***bold and italics***, and the examiner's response to the amendments is shown in **bold** in this office action.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/31/2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness
or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 4, 6, 7, 12-16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saussy (U.S. Patent Publication # 5,936,963)**, in view of **Banerjee et al.** (**U.S. Patent Application Publication 2003/0154313 A1)** and further in view of **Baum et al. (U.S. Patent Publication # 6,904,054 B1).**

Consider **claim 1**, Saussy clearly shows and discloses a method of providing asymmetric Ethernet service (Abstract; Fig. 1, block 14 marked EAC (Ethernet ADSL Converter at the subscriber's premises) and block 40 marked MUX or AEM (Asymmetric Ethernet Multiplexer at the Central Office) that together provide an asymmetric Ethernet service (with downstream data rate of 10 Mbps and upstream data rate of 640 Kbps); column 3, lines 27-34 that disclose a method for providing asymmetric Ethernet service using subscriber premises device EAC and central office device AEM that aggregates data from a plurality of EAC devices into one or more Ethernet connections; column 4, lines 62-65 that disclose a method to establish asymmetric full-duplex circuits connecting a central location 6 and a node 8 remote from the point of service); comprising:

providing an Ethernet network remote from a point of service and in communication with the point of service (Fig. 1, block 32 marked Ethernet representing subscriber's Ethernet node remote from the Ethernet network, but connected to it by ADSL communication path 12; column 2, lines 29-32, that disclose a high-speed bidirectional ADSL communication path between a household or small office and the local telecommunication provider's central office, connecting the remote household to enterprise LAN); and

establishing an asymmetric Ethernet communication between the remote Ethernet network and the point of service to allow access to the asymmetric Ethernet service by a subscriber (Fig. 1 that shows an asymmetric Ethernet communications connection between the Central Office MUX and the subscriber's Ethernet port 32. The download

speed of 10 Mbps is clearly different from the upload speed of 640 Kbps, indicating asymmetric Ethernet connection).

Although Saussy does disclose establishing the asymmetric Ethernet communication while maintaining asymmetry, Saussy does not explicitly disclose wherein establishing the asymmetric Ethernet communication comprises utilizing aggregated Ethernet connections to increase data transfer bandwidths while maintaining asymmetry***, wherein utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service***.

In the same field of endeavor, Banerjee et al. show and disclose a method for utilizing aggregated Ethernet connections to increase data transfer bandwidths (Fig. 4, repeaters 410-416 that aggregate data from/to clients 420-426 and switch 405 that aggregates data from/to repeaters 410-416; paragraph 0032 that described the system; paragraph 0033 which discloses that each repeater is connected to a channel of the Ethernet switch 405 and that these channels are aggregated into one Etherchannel, which in turn is connected to the server 400 shown in Fig. 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a method for utilizing aggregated Ethernet

connections to increase data transfer bandwidths, as taught by Banerjee et al. in the method of Saussy, so that higher data transmission bandwidths for the network may be achieved.

However, Saussy, as modified by Banerjee et al., do not specifically disclose a method wherein ***utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service.***

In the same field of endeavor, Baum et al. show and disclose a method wherein ***utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service*** **(Fig. 7 that shows DSLAM 111 with Mux 115 as an aggregator, utilizing the aggregated ADSL Ethernet connections 300_1 and 300_2 to increase the data transfer bandwidth 119 between the remote Ethernet network (ADN (ADSL Data Network) Switch 123) and the**

point of service (CO 100 (Central Office); column 3, lines 6-67 and column 4, lines 1-37 disclose the aggregator in more details).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a method wherein utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service, as taught by Baum et al., in the method of Saussy, as modified by Banerjee et al., so that higher data transmission bandwidths for the network may be achieved.

Consider **claim 3**, **and as applied to claim 1 above** Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses that the upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication is slower than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service (in Saussy reference, Fig. 1 that shows data rate of 10 Mbps from the Ethernet network to the subscriber's Ethernet port, but the upload data rate of only 640 Kbps from the subscriber's Ethernet port 32 to the Central Office MUX 40; column 4, lines 1-3 that disclose the same details).

Consider **claim 4**, **and as applied to claim 1 above**, Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses a method for establishing an asymmetric Ethernet communication between the Ethernet network and the point of service that comprises:

utilizing a first asymmetric DSL modem to provide ~~an~~ ***a first*** Ethernet port for connection to the Ethernet network (in Saussy reference, column 4, lines 17-23 which disclose that the AEM (marked as MUX in Fig. 1) offers a large number of Asymmetric Link ports with transmit and receive inverted (so that many EACs can connect to the AEM, one of them from the subscriber's premises). AEM also offers one or more Ethernet ports for the enterprise LAN at the central office, operating at either 10 Mbps or at 100 Mbps, as shown in Fig. 1); and

utilizing a second asymmetric DSL modem to provide ~~an~~ ***a second*** Ethernet port for the point of service, where the first asymmetric DSL modem is in data communication with the second asymmetric DSL modem to carry the Ethernet communications asymmetrically (in Saussy reference, Fig. 1, EAC block 14 and connection 20; column 5, lines 3-8 that describe EAC as an ADSL modem at the customer's premises connected to one of the AEM's (MUX in Fig. 1) modem by connection 12).

Consider **claim 6**, Saussy shows and discloses a system for providing asymmetric Ethernet service (Abstract; Fig. 1, block 14 marked EAC (Ethernet ADSL Converter at the subscriber's premises) and block 40 marked MUX or AEM (Asymmetric

Ethernet Multiplexer at the Central Office) that together provide an asymmetric Ethernet service (with downstream data rate of 10 Mbps and upstream data rate of 640 Kbps); column 3, lines 27-34 that disclose a method for providing asymmetric Ethernet service using subscriber premises device EAC and central office device AEM that aggregates data from a plurality of EAC devices into one or more Ethernet connections; column 4, lines 62-65 that disclose a method to establish asymmetric full-duplex circuits connecting a central location 6 and a node 8 remote from the point of service), comprising:

an Ethernet network including an Ethernet port (Fig. 1, line marked 10 Base T / 100 Base T that represents a connection to an Ethernet port of an Ethernet network; column 4, lines 20-23 which disclose that the AEM provides connections for one or more Ethernet ports of an Ethernet network);

a point of service located remotely from the Ethernet network (Fig. 1, block 32 marked Ethernet representing subscriber's Ethernet node remote from the Ethernet network, but connected to it by ADSL communication path 12; column 2, lines 29-32, that disclose a high-speed bidirectional ADSL communication path between a household or small office and the local telecommunication provider's central office, connecting the remote household to enterprise LAN);

and an asymmetric Ethernet communications connection between the point of service and the Ethernet port of the Ethernet network, wherein the asymmetric Ethernet communications connection is configured to provide an upload speed from the point of service to the Ethernet port of the Ethernet network that is a different speed than a

download speed from the Ethernet port of the Ethernet network to the point of service (Fig. 1 that shows an asymmetric Ethernet communications connection between the Central Office MUX and the subscriber's Ethernet port 32. The download speed of 10 Mbps is clearly different from the upload speed of 640 Kbps, indicating asymmetric Ethernet connection).

Although Saussy does disclose establishing the asymmetric Ethernet communication while maintaining asymmetry, Saussy does not explicitly disclose wherein establishing the asymmetric Ethernet communication comprises utilizing aggregated Ethernet connections to increase data transfer bandwidths while maintaining asymmetry***, wherein utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service.***

In the same field of endeavor, Banerjee et al. show and disclose a system for utilizing aggregated Ethernet connections to increase data transfer bandwidths (Fig. 4, repeaters 410-416 that aggregate data from/to clients 420-426 and switch 405 that aggregates data from/to repeaters 410-416; paragraph 0032 that described the system; paragraph 0033 which discloses that each repeater is connected to a channel of the

Ethernet switch 405 and that these channels are aggregated into one Etherchannel, which in turn is connected to the server 400 shown in Fig. 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a system for utilizing aggregated Ethernet connections to increase data transfer bandwidths, as taught by Banerjee et al. in the system of Saussy, so that higher data transmission bandwidths for the network may be achieved.

However, Saussy, as modified by Banerjee et al., do not specifically disclose a system wherein ***utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service.***

In the same field of endeavor, Baum et al. show and disclose a system wherein ***utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between***

the remote Ethernet network and the point of service **(Fig. 7 that shows DSLAM 111 with Mux 115 as an aggregator, utilizing the aggregated ADSL Ethernet connections 300_1 and 300_2 to increase the data transfer bandwidth 119 between the remote Ethernet network (ADN (ADSL Data Network) Switch 123) and the point of service (CO 100 (Central Office); column 3, lines 6-67 and column 4, lines 1-37 disclose the aggregator in more details).**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a system wherein utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service, as taught by Baum et al., in the system of Saussy, as modified by Banerjee et al., so that higher data transmission bandwidths for the network may be achieved.

Consider **claim 7**, **and as applied to claim 6 above**, Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses a system for establishing an asymmetric Ethernet communication between an Ethernet network and a remote point of service that comprises utilizing a first asymmetric DSL modem to provide an Ethernet port for connection to the Ethernet network (in Suassy reference, column 4,

lines 17-23 which disclose that the AEM (marked as MUX in Fig. 1) offers a large number (including one selected to be a first asymmetrical DSL modem) of asymmetric link ports with transmit and receive inverted. AEM also offers one or more Ethernet ports for the enterprise LAN at the central office, operating at either 10 Mbps or at 100 Mbps, as shown in Fig. 1);

and a second ADSL modem at the point of service in communication with the first ADSL modem to carry the Ethernet communications asymmetrically (in Saussy reference, Fig. 1, EAC block 14 and connection 20; column 5, lines 3-8 that describe EAC as an ADSL modem at the customer's premises connected to one of the AEM's (MUX in Fig. 1) modem by connection 12).

Consider **claim 12**, **and as applied to claim 6 above,** Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses that the upload speed from the point of service to the Ethernet network is slower than the download speed from the Ethernet network to the point of service (Fig. 1 that shows data rate of 10 Mbps from the Ethernet network to the subscriber's Ethernet port, but the upload data rate of only 640 Kbps from the subscriber's Ethernet port 32 to the Central Office MUX 40; column 4, lines 1-3 that disclose the same details).

Consider **claim 13**, Saussy clearly shows and discloses a system for providing asymmetric Ethernet service to a network device of a subscriber (Abstract; Fig. 1, block 14 marked EAC (Ethernet ADSL Converter at the subscriber's premises) and block 40

marked MUX or AEM (Asymmetric Ethernet Multiplexer at the Central Office) that together provide an asymmetric Ethernet service (with downstream data rate of 10 Mbps and upstream data rate of 640 Kbps); column 3, lines 27-34 that disclose a system for providing asymmetric Ethernet service using subscriber premises device EAC and central office device; column 4, lines 62-65 that disclose a system to establish asymmetric full-duplex circuits connecting a central location 6 and a node 8 remote from the point of service); comprising:

~~an~~ ***a first*** Ethernet network including an Ethernet port (Fig. 1, line marked 10 Base T / 100 Base T that represents a connection to an Ethernet port of an Ethernet network; column 4, lines 20-23 which disclose that the AEM provides connections for one or more Ethernet ports of an Ethernet network);

a point of service located remotely from the Ethernet network (Fig. 1, block 32 marked Ethernet representing subscriber's Ethernet node remote from the Ethernet network, but connected to it by ADSL communication path 12; column 2, lines 29-32, that disclose a high-speed bidirectional ADSL communication path between a household or small office and the local telecommunication provider's central office, connecting the remote household to enterprise LAN);

an Ethernet connection between the point of service and the Ethernet port of the Ethernet network, wherein the Ethernet connection ~~provides for~~ ***is configured to provide*** an upload speed from the point of service to the Ethernet port of the Ethernet network that is a different speed than a download speed from the Ethernet port of the Ethernet network to the point of service (Fig. 1 that shows an asymmetric Ethernet

communications connection between the Central Office MUX and the subscriber's Ethernet port 32. The download speed of 10 Mbps is clearly different from the upload speed of 640 Kbps, indicating asymmetric Ethernet connection); and

an Ethernet connection between the point of service and the network device of the subscriber (Fig. 1, where Ethernet connection 20 is shown above network device block 22).

Although Saussy does disclose establishing the asymmetric Ethernet communication while maintaining asymmetry, Saussy does not explicitly disclose wherein establishing the asymmetric Ethernet communication comprises utilizing aggregated Ethernet connections to increase data transfer bandwidths while maintaining asymmetry***, wherein utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service;*** and ~~an~~ ***a second*** Ethernet connection between the point of service and the network device of the subscriber.

In the same field of endeavor, Banerjee et al. show and disclose a system for utilizing aggregated Ethernet connections to increase data transfer bandwidths (Fig. 4, repeaters 410-416 that aggregate data from/to clients 420-426 and switch 405 that

aggregates data from/to repeaters 410-416; paragraph 0032 that described the system; paragraph 0033 which discloses that each repeater is connected to a channel of the Ethernet switch 405 and that these channels are aggregated into one Etherchannel, which in turn is connected to the server 400 shown in Fig. 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a system for utilizing aggregated Ethernet connections to increase data transfer bandwidths, as taught by Banerjee et al. in the system of Saussy, so that higher data transmission bandwidths for the network may be achieved.

However, Saussy, as modified by Banerjee et al., do not specifically disclose a system wherein ***utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service.***

In the same field of endeavor, Baum et al. show and disclose a system wherein ***utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate***

the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service **(Fig. 7 that shows DSLAM 111 with Mux 115 as an aggregator, utilizing the aggregated ADSL Ethernet connections 300_1 and 300_2 to increase the data transfer bandwidth 119 between the remote Ethernet network (ADN (ADSL Data Network) Switch 123) and the point of service (CO 100 (Central Office); column 3, lines 6-67 and column 4, lines 1-37 disclose the aggregator in more details).**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a system wherein utilizing the aggregated Ethernet connections to increase the data transfer bandwidths comprises using an aggregator device in communication with the Ethernet network and a plurality of asymmetric Ethernet connections, wherein using the aggregator device comprises using the aggregator device to aggregate the plurality of asymmetric Ethernet connections to provide a resultant asymmetric Ethernet connection at a resultant data transfer bandwidth between the remote Ethernet network and the point of service, as taught by Baum et al., in the system of Saussy, as modified by Banerjee et al., so that higher data transmission bandwidths for the network may be achieved.

Consider **claim 14**, **and as applied to claim 13 above**, Saussy, as modified by Banerjee et al. and Baum et al., further discloses that the Ethernet connection between the point of service and the network device of the subscriber includes a router

positioned between the point of service and a computer (in Saussy reference, Abstract that discloses a premises device is attached to any network node (such as a personal computer, LAN bridge/router, terminal server, etc.) which offers an Ethernet interface; column 3, lines 34-37 that disclose a router between the point of service and a computer).

Consider **claim 15**, **and as applied to claim 13 above**, Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses an ADSL modem providing an Ethernet port of the service provider data network (in Saussy reference, Fig. 1, line marked 10 Base T / 100 Base T that represents a connection to an Ethernet port of the service provider data network; column 4, lines 20-23 which disclose that the AEM provides connections for one or more Ethernet ports of the service provider data network);

Consider **claim 16**, and **as applied to claim 14 above**, Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses a second ADSL modem at the point of service in communication with the first ADSL modem (in Saussy reference, Fig. 1, EAC block 14 (a second ADSL modem); column 5, lines 3-8 that describe EAC as an ADSL modem at the customer's premises connected to one of the AEM's (MUX in Fig. 1) modem (the first ADSL modem) by connection 12).

Consider **claim 21**, **and as applied to claim 14 above**, Saussy, as modified by Banerjee et al. and Baum et al., further shows and discloses that the upload speed from the subscriber point of service to the service provider network is slower than the download speed from the service provider network to the subscriber point of service. (in Saussy reference, Fig. 1, where the speed from the point of service to the Ethernet network is marked by the upward arrow showing a data rate of 640 Kbps, and the speed from the Ethernet network to the point of service is marked by the downward arrow showing data rate of 10 Mbps; column 4, lines 1-3 that disclose the same details).

Claims 2, 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saussy (U.S. Patent Publication # 5,936,963)** in view of **Banerjee et al.** (**U.S. Patent Application Publication 2003/0154313 A1)** and further in view of **Baum et al. (U.S. Patent Publication # 6,904,054 B1)** and further in view of **Redfern** (**U.S. Patent Application Publication 2003/0198217 A1).**

Consider **claim 2**, **and as applied to claim 1 above,** Saussy, as modified by Banerjee et al. and Baum et al., shows and discloses a method of providing asymmetric Ethernet service (in Saussy reference, Abstract; Fig. 1, block 14 marked EAC and block 40 marked MUX that together provide an asymmetric Ethernet connection; column 4, lines 62-65 that disclose a way to establish asymmetric full-duplex circuits connecting a premises device and a central device. The premises device converts a standard Ethernet interface into the asymmetric full-duplex link).

However, Saussy, as modified by Banerjee et al., does not expressly disclose that the upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication is faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service.

In the same field of endeavor, Redfern describes users that require upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service (paragraphs 0006, lines 1-7; paragraph 0009; Fig. 4 and paragraph 0010, that disclose an apparatus and a method for providing extended upstream data transmission an additional frequency band between f1 and f2 originally reserved for download communication from central office to the subscriber) and lowering the power spectral density in that frequency band to minimize cross-talk).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide the upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service, as taught by Redfern in the method of Saussy, as modified by Banerjee et al. and Baum et al., so that the needs of the users who are required to transmit large amount of data from subscriber to the Ethernet network can also be met.

Consider **claim 11, and as applied to claim 6 above,** Saussy, as modified by Banerjee et al. and Baum et al., shows and discloses a system of providing asymmetric Ethernet service except disclose that the upload speed from the point of service to the Ethernet network is faster than the download speed from the Ethernet network to the point of service.

In the same field of endeavor, Redfern describes users that require upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service (paragraphs 0006, lines 1-7; paragraph 0009; Fig. 4 and paragraph 0010, that disclose a system for providing extended upstream data transmission an additional frequency band between f1 and f2 originally reserved for download communication from central office to the subscriber) and lowering the power spectral density in that frequency band to minimize cross-talk).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide the upload speed from the point of service to the Ethernet network faster than the download speed from the Ethernet network to the subscriber point of service, as taught by Redfern in the system of Saussy, as modified by Banerjee et al. and Baum et al., so that the needs of the users who are required to transmit large amount of data from subscriber to the Ethernet network can also be met.

Consider **claim 20, and as applied to claim 14 above,** Saussy, as modified by Banerjee et al. and Baum et al., shows and discloses a system of providing asymmetric Ethernet service except disclose that the upload speed from the subscriber point of service to the service provider network is faster than the download speed from the service provider network to the subscriber point of service.

In the same field of endeavor, Redfern describes users that require upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service (paragraphs 0006, lines 1-7; paragraph 0009; Fig. 4 and paragraph 0010, that disclose a system for providing extended upstream data transmission an additional frequency band between f1 and f2 originally reserved for download communication from central office to the subscriber) and lowering the power spectral density in that frequency band to minimize cross-talk).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide the upload speed from the point of service to the Ethernet network faster than the download speed from the Ethernet network to the subscriber point of service, as taught by Redfern in the system of Saussy, as modified by Banerjee et al. and Baum et al., so that the needs of the users who are required to transmit large amount of data from subscriber to the Ethernet network can also be met.

Claims 5, 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saussy (U.S. Patent Publication # 5,936,963)** in view of **Banerjee et al. (U.S. Patent Application Publication 2003/0154313 A1)** and further in view of **Baum et al. (U.S. Patent Publication # 6,904,054 B1)** and further in view of **White et al. (U.S. Patent Application Publication 2005/0025175 A1).**

Consider **claim 5, and as applied to claim 4 above**, Saussy, as modified by Banerjee et al. and Baum et al., shows and discloses a method for establishing an Ethernet communication between the Ethernet network and the point of service, including: utilizing a third asymmetric DSL modem to provide ~~an~~ ***a third*** Ethernet port for connection to the Ethernet network, wherein the ***third*** Ethernet port of the third asymmetric DSL modem and the ***first*** Ethernet port of the first asymmetric DSL modem are aggregated at an aggregator device in communication with the Ethernet network (in Saussy reference, Fig. 1, block 8 marked as NODE (2) (third ADSL modem) and EAC block 14 (first ADSL modem) along with other nodes being aggregated by MUX block 40; column 4, lines 17-23 that disclose the aggregation of multiple ports into one or more Ethernet ports operating at 10 Mbps or 100 Mbps speed).

However, Saussy, as modified by Banerjee et al. and Baum et al., does not expressly disclose utilizing a fourth asymmetric DSL modem to provide ~~an~~ ***a fourth*** Ethernet port for the point of service, wherein the ***fourth*** Ethernet port of the fourth

asymmetric DSL modem and the ***second*** Ethernet port of the second asymmetric DSL modem are aggregated at ~~an~~ ***the*** aggregator device at the subscriber point of service.

In the same field of endeavor, White et al. show and disclose a fourth asymmetric DSL modem to provide an Ethernet port for the point of service, wherein the Ethernet port of the fourth asymmetric DSL modem and the Ethernet port of the second asymmetric DSL modem are aggregated at an aggregator device at the subscriber point of service (Fig. 1, modem blocks 80 (representing a second asymmetric DSL modem) and 82 (representing a fourth asymmetric DSL modem) being aggregated by Remote Ethernet Device 24 (representing an aggregator device).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide a fourth asymmetric DSL modem to provide an Ethernet port for the point of service, wherein the Ethernet port of the fourth asymmetric DSL modem and the Ethernet port of the second asymmetric DSL modem are aggregated at an aggregator device at the subscriber point of service, as taught by White et al. in the method of Saussy, as modified by Banerjee et al. and Baum et al., so that the downstream data from a more than one subscriber ports can be aggregated and sent over a single connection as a cost effective upload data transmission method.

Consider **claim 8**, **and as applied to claim 7 above**, Saussy, as modified by Banerjee et al. and Baum et al., shows and discloses a third ADSL modem aggregated with the first ADSL modem (in Saussy reference, Fig. 1, block 8 marked as NODE (2) (third ADSL modem) and EAC block 14 (first ADSL modem) along with other nodes

being aggregated by MUX block 40; column 4, lines 17-23 that disclose the aggregation of multiple ports into one or more Ethernet ports operating at 10 Mbps or 100 Mbps speed).

However, Saussy, as modified by Banerjee et al. and Baum et al., does not expressly disclose utilizing a fourth asymmetric DSL modem to provide an Ethernet port for the point of service, wherein the Ethernet port of the fourth asymmetric DSL modem and the Ethernet port of the second asymmetric DSL modem are aggregated at an aggregator device at the subscriber point of service.

In the same field of endeavor, White et al. show and disclose a fourth ADSL modem in communication with the third ADSL modem and being aggregated with the second ADSL modem to carry the Ethernet communications asymmetrically (Fig. 1, modem blocks 80 (representing a second asymmetric DSL modem) and 82 (representing a fourth asymmetric DSL modem) being aggregated by Remote Ethernet Device 24 (representing an aggregator device)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide a fourth asymmetric DSL modem to provide an Ethernet port for the point of service, wherein the Ethernet port of the fourth asymmetric DSL modem and the Ethernet port of the second asymmetric DSL modem are aggregated at an aggregator device at the subscriber point of service, as taught by White et al. in the system of Saussy, as modified by Banerjee et al. and Baum et al., so that the downstream data from more than one subscriber ports can be aggregated and sent over a single connection as a cost effective upload data transmission method.

Consider **claim 17, and as applied to claim 16 above**, Saussy, as modified by Banerjee et al. and Baum et al., shows and discloses a third ADSL modem aggregated with the ADSL modem (in Saussy reference, Fig. 1, block 8 marked as NODE (2) (third ADSL modem) and EAC block 14 (first ADSL modem) along with other nodes being aggregated by MUX block 40; column 4, lines 17-23 that disclose the aggregation of multiple ports into one or more Ethernet ports operating at 10 Mbps or 100 Mbps speed).

However, Saussy, as modified by Banerjee et al. and Baum et al., does not expressly disclose a fourth ADSL modem in communication with the third ADSL modem and being aggregated with the second ADSL modem.

In the same field of endeavor, White et al. show and disclose a fourth ADSL modem in communication with the third ADSL modem and being aggregated with the second ADSL modem (Fig. 1, modem blocks 80 (representing a second asymmetric DSL modem) and 82 (representing a fourth asymmetric DSL modem) being aggregated by Remote Ethernet Device 24 (representing an aggregator device)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide a fourth asymmetric DSL modem to provide an Ethernet port for the point of service, wherein the Ethernet port of the fourth asymmetric DSL modem and the Ethernet port of the second asymmetric DSL modem are aggregated at an aggregator device at the subscriber point of service, as taught by White et al. in the system of Saussy, as modified by Banerjee et al. and Baum et al., so

that the downstream data from more than one subscriber ports can be aggregated and sent over a single connection as a cost effective upload data transmission method.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saussy (U.S. Patent Publication # 5,936,963)** in view of **Banerjee et al. (U.S. Patent Application Publication 2003/0154313 A1)** and further in view of **Baum et al. (U.S. Patent Publication # 6,904,054 B1)** and further in view of **White et al. (U.S. Patent Application Publication 2005/0025175 A1)** and further in view of **Deng (U.S. Patent Publication 6,243,394 B1).**

Consider **claim 9, and as applied to claim 8 above,** Saussy, as modified by Banerjee et al., Baum et al. and White et al., shows and discloses a system of providing asymmetric Ethernet service except disclose a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem.

In the same field of endeavor, Deng discloses a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem (Fig. 1, ADSL Access Device block 14 (first Ethernet switch) aggregating connection 22 (for the first ADSL modem) with connection 24 (for the third ADSL modem) and ADSL Access Device block 40 (second Ethernet switch) aggregating unmarked workstation to the left (via the second ADSL modem) with LAN block 50 (via the fourth ADSL modem)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem, as taught by Deng in the system of Saussy, as modified by Banerjee et al., Baum et al. and White et al., so that data from more than one subscriber ports can be aggregated and sent over a single connection as a cost effective data transmission method.

Consider **claim 18, and as applied to claim 17 above,** Saussy as modified by Banerjee et al., Baum et al. and White et al. clearly show and disclose a system of providing asymmetric Ethernet service except disclosing a first Ethernet switch aggregating the ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem.

In the same field of endeavor, Deng discloses a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem (Fig. 1, ADSL Access Device block 14 (first Ethernet switch) aggregating connection 22 (for the first ADSL modem) with connection 24 (for the third ADSL modem) and ADSL Access Device block 40 (second Ethernet switch) aggregating unmarked workstation to the left (via the second ADSL modem) with LAN block 50 (via the fourth ADSL modem)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide a first Ethernet switch aggregating the

first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem, as taught by Deng in the system of Saussy, as modified by Banerjee et al., Baum et al. and White et al., so that data from more than one subscriber ports can be aggregated and sent over a single connection as a cost effective data transmission method.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saussy (U.S. Patent Publication # 5,936,963)** in view of **Banerjee et al. (U.S. Patent Application Publication 2003/0154313 A1)** and further in view of **Baum et al. (U.S. Patent Publication # 6,904,054 B1)** and further in view of **White et al. (U.S. Patent Application Publication 2005/0025175 A1)** and further in view of **Deng (U.S. Patent Publication 6,243,394 B1)** and further in view of **Olshansky et al. (U.S. Patent Publication 6,061,357).**

Consider **claim 10**, **and as applied to claim 9 above,** Saussy as modified by Banerjee et al., Baum et al., White et al. and Deng show and disclose a system of providing asymmetric Ethernet service except disclose that the first and second Ethernet switches perform rate shaping and load balancing when transferring data.

In the same field of endeavor, Olshansky et al. disclose that the first and second Ethernet switches perform rate shaping and load balancing when transferring data (Fig. 3, Ethernet to ADSL adapter block 110, wherein Controller 130 balances load by issuing jamming commands and Pause/Resume commands during data flow through AE Buffer

122 and EA buffer 120; Figs. 4-7 and column 4, lines 22-67; column 5, lines 1-67; column 6, lines 1-48 that respectively describe load balancing and rate shaping during receive operation at Ethernet network port (Fig. 4), during transmit operation to ADSL modem (Fig. 5), during receive operation from ADSL modem (Fig. 6), and during transmit operation from Ethernet network port (Fig. 7)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide the first and second Ethernet switches that perform rate shaping and load balancing when transferring data, as taught by Olshansky et al. in the system of Saussy, as modified by Banerjee et al., Baum et al., White et al. and Deng, so that asymmetrical upload and download data rates of ADSL data transmission can be managed without data being overwritten in the buffers that temporarily hold data packets.

Consider **claim 19**, **and as applied to claim 18 above,** Saussy as modified by Banerjee et al., Baum et al., White et al. and Deng clearly show and disclose a system of providing asymmetric Ethernet service except disclose that the first and second Ethernet switches perform rate shaping and load balancing when transferring data.

In the same field of endeavor, Olshansky et al. disclose that the first and second Ethernet switches perform rate shaping and load balancing when transferring data (Fig. 3, Ethernet to ADSL adapter block 110, wherein Controller 130 balances load by issuing jamming commands and Pause/Resume commands during data flow through AE Buffer 122 and EA buffer 120; Figs. 4-7 and column 4, lines 22-67; column 5, lines 1-67;

column 6, lines 1-48 that respectively describe load balancing and rate shaping during receive operation at Ethernet network port (Fig. 4), during transmit operation to ADSL modem (Fig. 5), during receive operation from ADSL modem (Fig. 6), and during transmit operation from Ethernet network port (Fig. 7)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide the first and second Ethernet switches that perform rate shaping and load balancing when transferring data, as taught by Olshansky et al. in the system of Saussy, as modified by Banerjee et al., Baum et al., White et al. and Deng, so that asymmetrical upload and download data rates of ADSL data transmission can be managed without data being overwritten in the buffers that temporarily hold data packets.

Response to Arguments

Applicants' arguments with respect to independent **claims 1, 6, 13 and dependent claims 2-5, 7-12 and 14-21** have been considered but are moot in view of the new ground(s) of rejection. Therefore, the **independent claims 1, 6, 13** and their **dependent claims 2-5, 7-12 and 14-21 remain rejected.**

Conclusion

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-1768. The Examiner can normally be reached on Monday-Thursday from 6:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-0800.

Kishin G. Belani

K.G.B./kgb

March 20, 2008

/Kenny S Lin/
Primary Examiner, Art Unit 2152